REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-16, 20-36, 38-54, 67-69, 70, 73-125 are pending in the present application, Claims 14, 32, 97, and 103 having been amended, and Claims 36, 67-69, and 99 having been canceled without prejudice or disclaimer. Claims 14, 32, 97, and 103 are amended to more clearly describe and distinctly claim the subject matter regarded as the invention without the introduction of new matter. Applicants respectfully submit that no new issues are raised by the present amendment, and respectfully request that this amendment be entered.

In the outstanding Office Action, Claims 36 and 67-69 were rejected under 35 U.S.C. §101; Claims 97-109 and 118-124 were rejected under 35 U.S.C. §103(a) as unpatentable over Yoshiura et al. (U.S. Patent No. 6,131,162, hereinafter Yoshiura) in view of Musgrave (U.S. Patent No. 6,208,746); Claims 1-16, 20-25, 29, 30, 53, and 73-96 were rejected as unpatentable over Yoshiura in view of Musgrave, and further in view of Milsted et al. (U.S. Patent No. 6,345,256); Claim 26 was rejected under 35 U.S.C. §103(a) as unpatentable over Yoshiura in view of Musgrave, and further in view of Milsted and Finkelstein et al. (U.S. Patent No. 5,185,733, hereinafter Finkelstein); Claims 27, 28, 31, and 70 were rejected under 35 U.S.C. §103(a) as unpatentable over Yoshiura in view of Musgrave, and further in view of Milsted and Gell (U.S. Patent No. 6,577,858); Claims 45-53 were rejected under 35 U.S.C. §103(a) as unpatentable over Musgrave view of Milsted and Gell; Claims 32-36, 38-40; 46-52, 54, 110-117, and 125 were rejected under 35 U.S.C. §103(a) as unpatentable over Musgrave in view of Milsted; Claims 67-69 were rejected under 35 U.S.C. §103(a) as unpatentable over Gell in view of Milsted; and Claims 41 and 42 were rejected under 35 U.S.C. §103(a) as unpatentable over Musgrave in view of Milsted, and further in view of Yoshiura;

With respect to the rejection of Claims 36 and 67-69 under 35 U.S.C. §101, Applicants respectfully submit that this ground of rejection is moot in view of the cancellation of Claims 36 and 67-69.

As the outstanding grounds of rejection rely on Yoshiura and Musgrave to reject many of the pending claims, a brief summary of the disclosure of each of these documents is provided..

Yoshiura discloses a system that allows the provenance of content to be traced. A purchaser generates a public and private key within their computer. The public key is sent to a content provider and this public key is used to encrypt the content. The encrypted content is sent to the purchaser of the content which is then decrypted using the corresponding private key. Also generated at the purchaser computer is a signature of the content. The signature is generated in accordance with both the private key and the content. The generated signature is then embedded into the decrypted content. As disclosed in column 13, line 46 and column 17, line 7 of Yoshiura, the signature is inseparably embedded into the content. As the signature is inseparably embedded into the content, if the purchaser subsequently copies the content and distributes this to a third party, the source of the illegally copied content can be traced to the purchaser. As the signature is embedded into content that has been legally paid for by the purchaser, the signature is not perceivable. If the content is copied, the content provider can extract the signature from the content (because they own the original content without the signature). The signature is then analysed to establish the public key used to generate the signature. This then is linked to the purchaser who is the source of the copied material.[1]

Musgrave discloses a system which embeds biometric watermarks into content. The biometric watermark *uniquely identifies the user*. The biometric data which forms the

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[1] Yoshiura, cols. 13 and 14.

watermark is sent by a user terminal to a content provider. The user also keeps a copy of the biometric data. The content may be encoded by the biometric data by modifying discrete cosine transform (DCT) coefficients of an MPEG encoder. The encoded content is then sent to the user who uses the stored biometric data to decode the encoded data. As the biometric data is used to set the DCTs of the MPEG encoding process, if the encoded content is received by an unauthorised user, they would not be able to decode the content into a perceivable form. It is noted that in column 4 lines 44-47 of Musgrave, the biometric watermark stops unauthorised use or theft of encrypted content because it is not possible to use the content which has been encoded using the biometric data.[2]

Claim 97 is amended to include the subject matter of Claim 99. Thus, amended Claim 99 recites, *inter alia*, "wherein the removal data is secured against unauthorized access thereto."

When rejection Claim 99, the subject matter of which is now included in Claim 97, the outstanding Office Action cites to col. 4, lines 44-47 of Musgrave. Specially, as noted above, col. 4, lines 44-47 of Musgrave merely highlights the advantages of using biometric data to encode content. In other words, the passage cited to by the outstanding Office Action with reference to Claim 99 merely identifies that by encoding content using biometric data the unauthorised copying or theft of content is prohibited. Musgrave does not disclose or suggest the claimed "wherein the removal data is secured against unauthorized access thereto." Musgrave states "Since the identical biometric data 24 is used to encode the requested data bitstream, the biometric data 24 is uniquely able to remove the biometric data."[3] However, Musgrave does not disclose or suggest that the removal data is secured against unauthorized access thereto.

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[2] Musgrave, cols. 3 and 4.
[3] Musgrave, col. 4, lines 9-12.

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Furthermore, <u>Yoshiura</u> does not disclose or suggest the claimed "using the second processor to remove the perceivable watermark using said removal data." <u>Yoshiura</u> teaches away from removing the watermark. As discussed above, the watermark is inseperable from the content so that illegal copying can be traced. If the watermark was removed from the content in <u>Yoshiura</u>, the essential purpose of tracking illegal copying would be impossible.

As <u>Yoshiura</u> discloses that the inseparability of the watermark from the content is essential, a person of ordinary skill in the art would not be motivated to modify the system of <u>Yoshiura</u> with the removable watermark of <u>Musgrave</u>.

"A reference may be said to teach away when a person of ordinary skill in the art, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re <u>Gurley</u>*, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994). To this end, "disclosures in the references that diverge from and teach away from the invention cannot be disregarded", <u>Phillips Petroleum Company v. U.S. Steel Corp.</u>, 9 U.S.P.Q.2d 1461 (Fed. Cir. 1989).

Further, Applicants note that MPEP §2143.02(VI) states "If the proposed modification or combination of the prior art would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification."

Moreover, the disparate teachings between <u>Yoshiura</u> and <u>Musgrave</u> do not suggest or teach a motivation for combining the references to arrive at the presently claimed invention. As a consequence, it is respectfully submitted that amended Claim 97 (and any claims dependent thereon) patentably distinguish over <u>Yoshiura</u> and <u>Musgrave</u>, taken alone or in proper combination. In addition, amended Claim 103 recites elements that are analogous to those of amended Claim 97. Applicants respectfully submit that Claim 103 (and any claims

dependent thereon) patentably distinguish over <u>Yoshiura</u> and <u>Musgrave</u>, taken alone or in proper combination, for at least the reasons stated for Claim 97.

With respect to the rejection of Claim 1 as an unpatentable over <u>Yoshiura</u> in view of <u>Musgrave</u>, and further in view of <u>Milsted</u>, Applicants respectfully traverse the rejection. Claim 1 recites, *inter alia*, "a system comprising…an apparatus for applying a watermark to the material and an apparatus for removing the watermark."

Paragraph 5 of the outstanding Office Action discusses the rejection of Claim 1. In the analysis set forth in paragraph 5, the Office Action states that there is disclosed in <u>Yoshiura</u> an apparatus for applying a watermark to the material and an apparatus for removing the watermark. The outstanding Office Action cites to col. 9, lines 32-34 of <u>Yoshiura</u> as disclosing an apparatus for removing the watermark. Col. 9, lines 32-34 of <u>Yoshiura</u> only states "apparatus for extracting from the extracted mark…." "Extracting" does not mean that the watermark is removed from the content.

As discussed above, the water mark is obtained by comparing the original (unwatermarked content) to the watermarked content and discerning the difference between the two. The watermark is always present (i.e., never removed) from the watermarked content. As is noted above, the watermark is never removed from <u>Yoshiura</u> because it is the watermark that is used to establish the provenance of the content. Furthermore, as noted above, a person of ordinary skill in the art would not modify the system in <u>Yoshiura</u> to remove the watermark, as this would negate the essential purpose of <u>Yoshiura</u>.

The outstanding Action appears to suggest that instead of considering this actual disclosed system to track illegal copying of <u>Yoshiura</u> and the associated functions performed thereby, it is permitted to simply consider the broad summary of the invention statements at col. 9, lines 32-34, of <u>Yoshiura</u> without regard to any of the actual embodiments taught by <u>Yoshiura</u>. However, controlling precedent does not permit such an approach.

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In this last regard, the court in *In re Kotzab* stated "the [reference] statements cannot be viewed in the abstract. Rather they must be considered in the context of the teaching of the entire reference."[4] This was not new law, note *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984) requiring "a fair reading of the prior art reference as a whole," and *In re Wesslau*, 147 USPQ 391, 393 (CCPA 1965) noting that "it is impermissible within the framework of §103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." Thus, the attempt to take broad statements from the "SUMMARY OF THE INVENTION" of Yoshiura out of the context of description of only disclosed embodiment of the system tracking illegal copying (as to actual operations performed as described at cols. 13-14), is clearly without merit.

The PTO is called upon to cite the authority it relies upon at the top of page 7 of the outstanding Office Action that provides the USPTO to limit consideration of the teachings of Yoshiura to just the parts of col. 9 noted in the outstanding Office Action. This is further relevant because these summary statements are clearly not detailed descriptions of the manner and means that achieve the stated objectives, just summaries of different aspects of the inventions that are only fully disclosed as to the "DESCRIPTION OF THE PREFERRED EMBODIMENT" that starts at col. 11.

In this regard, it is clear, for example, that the statements at col. 9 lines 32-34 relate to incomplete summaries of system operations, not to the actual manner that the watermark is extracted.

Claim 1 also recites "...transferring from the transaction server to the first apparatus (i) data for creating a watermark, the creating data including (a) data defining an invertible algorithm and (b) data for creating at least one security key associated with the algorithm, and

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[4] *In re Kotzab* (217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000).

(ii) data for creating a material identifier. In <u>Yoshiura</u>, the transaction server does not transfer data for creating the watermark. This is because in <u>Yoshiura</u>, the watermark is generated using the private key of the user and not the public key. By definition, the transaction server will only ever hold the public key of the user as the private key has to remain private to the user.

Furthermore, <u>Yoshiura</u> does not disclose creating a "material identifier." It is not clear what in <u>Yoshiura</u> the PTO believes equates to the claimed "material identifier." Page 7 of the outstanding Office Action states that the material identifier is found at col. 3, lines 18-22 of <u>Yoshiura</u>. However, page 8 of the outstanding Office Action states that <u>Yoshiura</u> does not mention the material identifier. It is presumed that the outstanding Office Action assumes that the signature of the content within <u>Yoshiura</u> is the material identifier. However, the signature of the content cannot equate to the claimed "material identifier." It is not the public key which is used to create the signature, it is the private key stored within the purchaser system that is used to generate the signature in <u>Yoshiura</u>. As noted above, the private key is not transferred.

Furthermore, the outstanding Office Action alleges that the signature is transferred from the client (purchaser) to the server (content provider). However, this is not the case. In <u>Yoshiura</u>, the signature which would be embedded as a non-perceivable watermark in the material would only ever be transferred from a third party to the content provider for authentication. The client would not transmit the material identifier from the client to the server. Further there is no motivation in <u>Yoshiura</u> for the user to transmit the signature to the server. Also, it is noted that the signature which is embedded in the material is never removed from the material.

Claim 1 also recites "...transferring from the transaction server to the second apparatus watermark removal data associated with said material identifier...." As noted

above, Yoshiura does not disclose removing the watermark. Furthermore, as noted above, a person of ordinary skill in the art would not be motivated to modify the system in Yoshiura to remove the watermark. If the watermark were to be removed, it would be impossible to trace to the provenance of the content which would completely go against the whole point of Yoshiura.

Therefore, the final paragraph of the Office Action on page 7 is considered to be without foundation. The portion of Yoshiura cited to in support of the rejection merely refers to the "extracted mark." As explained above, when Yoshiura is considered in its entirety, the "extracted mark" is obtained without removing the mark from the watermarked content.

Notwithstanding the above, it is respectfully submitted that these features missing from Yoshiura are not taught by Musgrave. Assuming, *arguendo*, that the outstanding Office Action intends to equate the watermark removal data to the biometric data in Musgrave, this would still be improper. In addition to the previous arguments as to why a person of ordinary skill in the art would not modify Yoshiura in view of the disclosure of Musgrave, Musgrave discloses that the biometric data is stored locally within the system of Musgrave. Therefore, the biometric data would never be transferred by the transaction server to the client.

Furthermore, Milsted does not cure the deficiencies in Musgrave and Yoshiura. As noted in col. 11, lines 22-26 of Milsted, the digital content always contains information regarding its source and its permitted use regardless of where the content resides or where it comes from. This information may be used to combat illegal use of the content. This passage highlights that the transfer of watermark removal data to remove the watermark from the material is also not taught in Milsted.

Therefore, it is submitted that even if a skilled person where to combine the teachings of Yoshiura with Musgrave and Milsted, they would not arrive at the claimed invention.

In view of the above-noted distinctions, Applicants respectfully submit that Claim 1 (and any claims dependent thereon) patentably distinguish over Yoshiura, Musgrave, and Milsted, taken alone or in proper combination. In addition, Claim 14 is amended to included elements similar to those of Claim 1. Furthermore, Claims 20 and 73 recite elements analogous to those of Claim 1. Applicants respectfully submit that Claims 14, 20, and 73 (and any claims dependent thereon) patentably distinguish over Yoshiura, Musgrave, and Milsted, taken alone or in proper combination, for at least the reasons stated for Claim 1.

With respect to the rejection of Claims 74, 91, and 96 as unpatentable over Yoshiura, Musgrave and Milsted, Applicants respectfully traverse the rejection.

Referring to Claims 74, 91 and 96, it is noted that Yoshiura, Musgrave and Milsted, taken alone or in proper combination, do not disclose the transfer of watermark removal data between the transaction server and the client as noted above. Accordingly, Claims 74, 91, and 96 (and any claims dependent thereon) patentably distinguish over Yoshiura, Musgrave, and Milsted, taken alone or in proper combination, for at least the reasons stated for Claim 1.

Moreover, Applicants respectfully submit that Claim 26 (which ultimately depends from Claim 20) further patentably distinguishes over the cited references. In paragraph 6 of the outstanding Office Action, Claim 26 is rejected as unpatentable over Yoshiura in view of Musgrave and Milsted, and further in view of Finkelstein. It is respectfully submitted that the above-noted features that are not taught in the combination of Yoshiura, Musgrave and Milsted are also not taught in Finkelstein. Therefore, it is submitted that claim 26 is not obvious over the combination of documents cited in the outstanding Office Action.

With respect to the rejection of Claims 27, 28, 31, and 70 as unpatentable over the combination of Yoshiura, Musgrave, Milsted, and Gell, this ground of rejection is respectfully traversed.

Applicants respectfully submit that the features discussed above as missing from the combination of Yoshiura, Musgrave, and Milsted, as explained with reference to Claims 1 and 20, are also not disclosed in Gell. Therefore, it is submitted that even if a person of ordinary skill in the art were to take these teachings which are in completely different technical fields and combine them in some way, they would not arrive at the claimed invention.

With respect to the rejection of Claims 43-45 in paragraph 8 of the outstanding Office Action, Applicants respectfully traverse the rejection. It is noted that neither Musgrave nor Milsted teach the transfer of the perceivable watermark removal data between the transaction server and the client being removable. Accordingly, it is submitted that even if a person of ordinary skill in the art were to combine the teachings of Musgrave, Milsted and Gell, they would not arrive at the subject matter of Claims 43-45. Therefore, it is submitted that Claims 43-45 are not obvious over the prior art.

With respect to the rejection of Claims 32-36, 38-40, 46, 54, 110-117, and 125 in paragraph 9 of the outstanding Office Action, this ground of rejection is respectfully traversed. It is respectfully submitted that Musgrave does not teach a material identifier as the alleged in the outstanding Office Action. Musgrave only discloses encoding content on the basis of biometric data. There is no discussion of a material identifier in Musgrave at all. The only identifier that is disclosed in Musgrave is a biometric identifier that identifies the user and **NOT** the material. To further clarify this distinction, Claim 32 is amended to recite "creating a material identifier identifying the material."

It is therefore submitted that Claim 32 (and all claims dependent thereon), are not obvious over the prior art.

As noted previously, now with reference to Claim 38, the positions set forth in outstanding Office Action are inconsistent. The outstanding Office Action states that

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Musgrave teaches "...applying identifying data to the material to identify the watermark material...."[5] However, the outstanding Office Action then states that Musgrave does not specifically mention the material identifier.[6] Therefore, it is assumed that the Office acknowledges that Musgrave does not apply identifying data to the material to identify the watermark material. All that Musgrave discloses is a biometric identifier identifying the user and not the material. As noted previously, the disclosure of Musgrave does not include the transfer of the removal data as that is stored locally with the user, as the user terminal has the biometric data. Therefore, it is submitted that Claim 38 (and any claims dependent thereon) is not obvious over any proper combination of the cited references.

With reference to Claim 46, as noted previously, Musgrave does not disclose the transfer of the removal data nor the material identifier. Accordingly, it is submitted that Claim 46 is not obvious over any proper combination of the cited references.

As Claim 47 recites elements analogous to those of Claim 46, it is respectfully submitted that Claim 47 (and all claims dependent thereon) are not obvious over any proper combination of the cited references.

With respect to the rejection of Claims 110 and 125, the outstanding Office Action again makes spurious reference to the term material identifier and alleges that Musgrave teaches such a feature and then goes on to say that Musgrave does not teach such a feature. In particular, there cannot be any disclosure in Musgrave of "storing the material identifier and data" as the outstanding Office Action alleges as the outstanding Office Action further states that Musgrave does not teach the material identifier.[7] All that Musgrave discloses is a system that allows biometric data to be transferred from a user to a content provider. The content provider then encodes the content using the biometric data and returns the encoded content to the user who decodes the content using the biometric data stored locally.

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[5] Office Action, page 25.
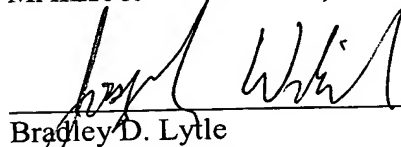[6] Office Action, page 26.
[7] Office Action, page 30.

As noted on numerous occasions before, there is no disclosure in <u>Musgrave</u> of at least transferring the watermark removal data from the first processor to the second processor. This is because it is the encoded content that is transferred. The biometric data is stored locally and not transferred from the content provider back to the user. It is submitted that Claim 110 (and any claims dependent thereon) are not obvious over any proper combination of the cited references.

With respect to the rejection of Claim 41 and 42, Applicants respectfully submit that these claims are allowable at least because of their dependence on Claim 38. It is respectfully submitted that the combination of <u>Musgrave</u> and <u>Milsted</u> does not teach the subject matter of Claim 38 as outlined above. Therefore, it is submitted that the combination of <u>Musgrave</u> in view of <u>Milsted</u> and <u>Yoshiura</u> does not teach the subject matter of Claims 41 and 42. Therefore, Claims 41 and 42 are not obvious in view of any proper combination of the cited references.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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